

## **TITLE 17. CALIFORNIA AIR RESOURCES BOARD**

### **NOTICE OF PUBLIC HEARING TO CONSIDER THE ADOPTION OF A PROPOSED AIRBORNE TOXIC CONTROL MEASURE FOR STATIONARY COMPRESSION IGNITION ENGINES**

The Air Resources Board (ARB or Board) will conduct a public hearing at the time and place noted below to consider adopting an airborne toxic control measure (ATCM) to reduce public exposure to diesel particulate matter (PM) and to control criteria pollutants emitted from stationary diesel-fueled, compression-ignition engines (stationary diesel engines). The control measure would reduce diesel PM and control criteria pollutant emissions through a combination of limits on annual operating hours and application of best available control technology. Owners, operators, sellers, buyers, and long-term renters of stationary diesel engines would be subject to and have responsibilities under the control measure. This notice summarizes the proposed control measure. The staff report presents the control measure in greater detail.

DATE: November 13, 2003

TIME: 9:00 a.m.

PLACE: California Environmental Protection Agency  
Air Resources Board  
Central Valley Auditorium, Second Floor  
1001 I Street  
Sacramento, California 95814

This item will be considered at a two-day meeting of the ARB, which will commence at 9:00 a.m., November 13, 2003, and may continue at 8:30 a.m., November 14, 2003. This item may not be considered until November 14, 2003. Please consult the agenda for the meeting, which will be available at least 10 days before November 13, 2003, to determine the day on which this item will be considered.

If you have special accommodation or language needs, please contact the ARB's Clerk of the Board at (916) 322-5594 or [sdorais@arb.ca.gov](mailto:sdorais@arb.ca.gov) as soon as possible. TTY/TDD/Speech-to-Speech users may dial 7-1-1 for the California Relay Service.

### **INFORMATIVE DIGEST OF PROPOSED ACTION AND POLICY STATEMENT OVERVIEW**

**Sections Affected:** Proposed adoption of new section 93115, title 17, California Code of Regulations (CCR). The following documents are incorporated herein by reference: (1) American Society for Testing and Materials (ASTM) Standards D 613-03b, D 975-03, D 1655-02 ; (2) *Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines*, dated October 2000; (3) Air Force Space Command Instruction 21-0114, dated March 27, 2000; (4) Office of the Chief of Naval Operations (OPNAV)

Instruction 1500.51B, dated March 31, 1989; (5) Military Specifications MIL-DTL-5624T, dated September 18, 1998, and MIL-T-83133E, dated April 1, 1999; (6) *Verification Procedure, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines*, 13 CCR 2700-2710; (7) *Exhaust Emission Standards and Test Procedures -- Off-Road Compression-Ignition Engines*, 13 CCR 2423; (8) National Fire Protection Association (NFPA) 25 - *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*, 1998; (9) 2001 California Building Code, 24 CCR Part 2, Vol. 2, Chapter 35 (Uniform Building Code Standards); (10) California Air Resources Board (ARB) Method 5, *Determination of Particulate Matter Emissions from Stationary Sources*, as amended July 28, 1997; (11) California Air Resources Board (ARB) Method 100, *Procedures for Continuous Gaseous Emission Stack Sampling*, as amended July 28, 1997; and (12) International Organization for Standardization (ISO) Methods 8178-1:1996(E), 8178-2:1996(E), and 8178-4:1996(E).

## **Background**

The California Toxic Air Contaminant Identification and Control Program (Program), established under California law by Assembly Bill 1807 (Stats. 1983, Ch. 1047) and set forth in Health and Safety Code (H&SC) sections 39650–39675, requires the ARB to identify and control air toxicants in California. In 1998, the Board identified diesel particulate matter as a toxic air contaminant (TAC) with no Board-specified threshold exposure level.

Following the identification of a substance as a TAC, H&SC section 39665 requires the ARB, with participation of the air pollution control and air quality management districts (districts) and in consultation with affected sources and interested parties, to prepare a report on the need and appropriate degree of regulation for that substance.

H&SC section 39665(b) requires that this “needs assessment” address, among other things, the technological feasibility of proposed ATCMs and the availability, suitability, and relative efficacy of substitute products or processes of a less hazardous nature.

A needs assessment for diesel PM was conducted between 1998 and 2000, which resulted in the ARB’s development of the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles (Diesel RRP). The Diesel RRP presented information that identified the available options for reducing diesel PM and recommended control measures to achieve further reductions. The scope of the Diesel RRP was broad, addressing all categories of engines, both mobile and stationary. For stationary diesel engines, the Diesel RRP identified and recommended the development of this proposed ATCM. ARB staff has prepared an Initial Statement of Reasons (ISOR or staff report) for the proposed ATCM that, together with the Diesel RRP, serves as the report on the need and appropriate degree of regulation for the proposed ATCM.

Once the ARB has evaluated the need and appropriate degree of regulation for a TAC, H&SC section 39666(c) requires the ARB to adopt regulations (ATCMs) to reduce

emissions of the TAC to the lowest level achievable through the application of best available control technology (BACT) or a more effective control method, in consideration of cost, risk, environmental impacts, and other specified factors. In developing the proposed ATCM, State law also requires an assessment of the appropriateness of substitute products or processes.

Stationary diesel engines emit approximately 910 tons per year of diesel PM. These engines are distributed throughout California, and many are located in urban centers where the population is exposed to diesel PM emissions. The proposed ATCM is designed to minimize the public's exposure to diesel PM by establishing stringent operational requirements and emission limits for these engines.

In addition to emitting TACs, stationary diesel engines also emit criteria pollutants such as oxides of nitrogen (NO<sub>x</sub>), oxides of sulfur (SO<sub>x</sub>), carbon monoxide (CO), and non-methane hydrocarbons (NMHC). Emissions of these criteria pollutants contribute to violations of applicable California and national ambient air quality standards (CAAQS and NAAQS, respectively). To control criteria pollutant emissions, H&SC section 43013(b) directs the ARB to adopt standards and regulations for nonvehicle engine categories, including but not limited to construction equipment, farm equipment, and utility engines. Because they are nonvehicle engines, stationary diesel engines subject to the proposed ATCM are covered by this mandate.

## **Description of the Proposed Regulatory Action**

### *Applicability*

With enumerated exceptions, the proposed ATCM would apply to any person who owns, operates, sells, offers for sale, leases, or buys a regulated stationary diesel engine for use in California. In general, a stationary diesel engine is one that remains in one location at a facility for more than 12 months. A new engine is one that is installed after January 1, 2005, while an in-use engine is one that is installed prior to January 1, 2005. The proposed ATCM has separate provisions for engines that are no more than 50 brake horsepower (bhp) and engines that are greater than 50 bhp.

### *Initial and Annual Reporting Requirements*

Owners and operators of existing stationary diesel engines rated greater than 50 bhp would be required to submit to the air districts specified information regarding their engines' make, model, fuel use, general use of the engine, and hours of operation. This information would be due no later than July 1, 2005.

Sellers of stationary diesel engines that are less than or equal to 50 bhp or engines used in agricultural operations would be required to submit to the ARB information identifying the types of engines sold and the number of engines sold per year. This information would be due no later than January 1, 2006 and annually thereafter for the prior year.

### *Bifurcated Standards and Requirements Based on Horsepower*

For new engines that are less than or equal to 50 bhp, the ATCM requires compliance with the current Off-Road Compression Ignition Engine Standards (Title 13 CCR Section 2423) applicable to an engine of the same brake horsepower rating and model year. These standards represent best available control technology for this category of engines. The ATCM would not require retrofits for any in-use engines in this horsepower category.

For engines that are greater than 50 bhp, the proposed ATCM establishes different requirements for emergency standby engines and prime engines, which are engines used in non-emergency applications. Separate requirements are also established for engines used in agricultural operations.

### *Clean Fuel Use Requirement*

By January 1, 2005, all stationary diesel engines greater than 50 bhp would be required to use either CARB diesel or a “clean” alternative, which includes CARB diesel/CNG (compressed natural gas) dual-fuel systems and alternative diesel fuels that have met the requirements of the ARB’s Verification Procedure (Title 13 CCR 2700-2710).

### *Requirements for Emergency Standby Engines*

An emergency standby engine is used to provide power during an electrical power outage; to provide for the emergency pumping of water during a flood or for fire suppression; or to power high-power, airport runway lights under low-visibility conditions. Because emergencies are generally infrequent, an emergency standby engine mostly operates during scheduled maintenance and testing periods. Rather than limiting the hours of engine operation during an emergency, the proposed ATCM would establish different diesel PM standards for both new and in-use emergency standby engines based on the number of maintenance and testing hours these engines are operated annually.

To provide flexibility for engine owners while ensuring that public exposure to diesel PM is minimized, the tiered diesel PM standards become more stringent as the annual hours of maintenance and testing operation increase. For example, an in-use engine that emit between 0.15 and 0.4 grams diesel PM per brake horsepower-hour (g/bhp-hr) would be permitted to run up to 30 hours annually for maintenance and testing. By contrast, an in-use engine that emits more than 0.40 g/bhp-hr would be permitted only 20 hours annually for maintenance and testing.

In addition to the diesel PM limits, the proposed ATCM would restrict criteria pollutant emissions by requiring new emergency standby engines to meet current Off-Road Compression Ignition Engine Standards. The ATCM would also prohibit in-use emergency standby engines from increasing criteria pollutant emissions when controlling diesel PM emissions.

### *Requirements for Prime Engines*

A prime diesel engine can be used in a wide variety of non-emergency applications. These include remote power generation, cranes, sand and gravel processing, and the pumping of fluids. Prime engines typically operate many more hours per year than emergency standby engines. Because of this, the ATCM would require prime engines to meet much more stringent emission limits than emergency standby engines. New prime engines would be limited to 0.01 g/bhp-hr of diesel PM, while in-use prime engines (that are off-road certified) would need to either meet the 0.01 g/bhp-hr standard or reduce diesel PM emissions by 85 percent from baseline levels. In-use prime engines that are not off-road certified would be given the option of either meeting the 0.01 g/bhp-hr standard or reducing diesel PM emissions by 30 percent (relative to baseline levels) by 2005 then replacing the engine in 2013 with an engine that emits no greater than 0.01 g/bhp-hr.

As with the requirements for emergency engines, the proposed ATCM restricts the criteria pollutant emissions by requiring new prime engines to meet current Off-Road Compression Ignition Engine Standards. In-use prime engines would be prohibited from increasing criteria pollutant emissions when controlling diesel PM. Because the ATCM focuses on applying best available control technology to prime engines, it does not limit the number of hours new and in-use prime engines may operate.

### *Requirements for Engines Used in Agricultural Operations*

The proposed ATCM also establishes separate diesel PM emission limits for new stationary diesel engines used in agricultural operations. These engines would be limited to diesel PM emissions of no greater than 0.15 g/bhp-hr. To control criteria pollutants, new agricultural engines would need to meet the Off-Road Compression Ignition Engine Standards applicable to engines of the same size and model year. In this proposal, the ATCM would not apply restrictions to in-use engines in agricultural operations. However, the ARB staff will continue investigating retrofit controls and other opportunities for future emission reductions from these engines.

### *Exemptions and Other Provisions*

The proposed ATCM establishes a number of exemptions from some or all of the operational requirements and emission limits discussed in the previous paragraphs. The proposed ATCM also contains sections addressing recordkeeping and reporting, monitoring equipment, compliance schedules, definitions, emissions data, and test methods.

There are no federal regulations that are comparable to the proposed ATCM.

### *Additional Provisions Under Consideration*

The ARB staff is currently considering language that would address diesel PM and criteria pollutants from stationary diesel engines operating under interruptible service contracts (ISC). Some engine owners have entered into ISCs with electric utilities to reduce their electrical demand when requested by the utilities in exchange for reduced electricity prices or other non-monetary consideration. Provisions to address these engines have been considered in prior workshops, but the exact language has not yet been developed. ARB staff will continue further development of such language during the 45-day comment period leading up to the Board hearing starting on November 13, 2003. If the provisions are finalized by that time, the ARB staff will present such language as a modification to the proposed ATCM for the Board's consideration at the hearing. As described below, an additional 15-day comment period will then be provided if the Board adopts either the ISC language proposed by ARB staff or a different version.

The ARB staff is also considering language that would define violations of the ATCM requirements and specify the applicable penalties. If the violation and penalties provisions are finalized before the Board hearing, the ARB staff will present such language as a modification to the proposed ATCM for the Board's consideration at the hearing. As noted previously, an additional 15-day comment period will then be provided if the Board adopts either the violations and penalties provision proposed by ARB staff or a different version.

### **AVAILABILITY OF DOCUMENTS AND AGENCY CONTACT PERSONS**

The Board staff has prepared a Staff Report: Initial Statement of Reasons (ISOR) for the proposed regulatory action, which includes a summary of the potential environmental and economic impacts of the proposal, if any. The ISOR is entitled, "Staff Report: Initial Statement of Reasons for the Proposed Airborne Toxic Control Measure for Stationary CI Engines."

Copies of the ISOR and the full text of the proposed regulatory language may be obtained from the Public Information Office, Air Resources Board, 1001 I Street, Visitors and Environmental Services Center, 1<sup>st</sup> Floor, Sacramento, CA 95814, (916) 322-2990 at least 45 days prior to the scheduled hearing which will begin on November 13, 2003.

Upon its completion, the Final Statement of Reasons (FSOR) will be available and copies may be requested from the agency contact persons in this notice, or may be accessed on the web site listed below.

Inquiries concerning the substance of the proposed regulations may be directed to the designated agency contact persons, Peggy Taricco, Manager of the Technical Analysis Section, at (916) 327-7213 or by email at [ptaricco@arb.ca.gov](mailto:ptaricco@arb.ca.gov), or Alex Santos, Staff Air Pollution Specialist, at (916) 327-5638 or by email at [asantos@arb.ca.gov](mailto:asantos@arb.ca.gov).

Further, the agency representative and designated back-up contact persons to whom nonsubstantive inquiries concerning the proposed administrative action may be directed are Artavia Edwards, Manager, Board Administration & Regulatory Coordination Unit, (916) 322-6070, and Alexa Malik, Regulations Coordinator, (916) 322-4011. The Board has compiled a record for this rulemaking action, which includes all the information upon which the proposal is based. This material is available for inspection upon request to the contact persons.

If you are a person with a disability and desire to obtain this document in an alternative format, please contact the Air Resources Board ADA Coordinator at (916) 323-4916, or TDD (916) 324-9531, or (800) 700-8326 for TDD calls from outside the Sacramento area.

This notice, the ISOR and all subsequent regulatory documents, including the FSOR, when completed, are available on the ARB Internet site for this rulemaking at <http://www.arb.ca.gov/regact/statde/statde.htm>.

### **COSTS TO PUBLIC AGENCIES AND TO BUSINESSES AND PERSONS AFFECTED**

The determinations of the Board's Executive Officer concerning the costs or savings necessarily incurred by public agencies and private persons and businesses in reasonable compliance with the proposed regulations are presented below.

Pursuant to Government Code sections 11346.5(a)(5) and 11346.5(a)(6), the Executive Officer has determined that the proposed regulatory action will not create costs or savings to any state agency or in federal funding to the state, costs or mandate to any local agency or school district whether or not reimbursable by the state pursuant to Part 7 (commencing with section 17500), Division 4, Title 2 of the Government Code, except as discussed below, or other nondiscretionary savings to state or local agencies.

While there are no impacts for fiscal years (FYs) 2003 and 2004, the proposed ATCM will impose a mandate upon and create costs to some local agencies for fiscal year 2005 and beyond. For FYs 2005-2009, local agencies operating diesel engines regulated under the proposed ATCM will need to spend approximately \$1.10 million per year. These costs are not reimbursable state mandated costs pursuant to Part 7 (commencing with section 17500), Division 4, Title 2 of the Government Code because most, if not all, of these agencies are authorized to collect fees to recoup their costs under Section 17500, et seq., of the Government Code, and the ATCM applies to all entities that own or operate stationary diesel engines and, therefore, does not impose unique requirements on local government agencies.

The Executive Officer has also determined that State government agencies with regulated engines will not incur costs during FYs 2003 and 2004. However, it is anticipated that State agencies will incur an annualized cost of about \$20,600 per year for FYs 2005 through 2009. This is the aggregate cost for all affected State agencies and represents the annualized capital cost and annual recurring cost savings from

reduced fuel use. Given the current fiscal and economic conditions, the Executive Officer cannot determine with certainty whether State agencies will be able to absorb these additional costs within current or future budgets, but it is anticipated that the agencies will be able to absorb annualized costs of this magnitude.

The Board's Executive Officer has also determined that individual local air districts may incur some permitting and enforcement costs as a result of implementing the proposed ATCM. However, the costs incurred by the air districts are not reimbursable state mandated costs because of the districts' authority to recover the costs through fee assessments authorized under H&SC sections 41512 and 42311.

In developing this regulatory proposal, the ARB staff evaluated the potential economic impacts on representative private persons or businesses. The ARB is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

The Executive Officer has made an initial determination that the proposed regulatory action will not have a significant statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states, or on representative private persons.

In accordance with Government Code section 11346.3, the Executive Officer has determined that the proposed regulatory action will not affect the creation or elimination of jobs within the State of California, the creation of new businesses or elimination of existing businesses within the State of California, or the expansion of businesses currently doing business within the State of California.

The Executive Officer has also determined, pursuant to title 1, CCR, section 4, that the proposed regulatory action will have some impact, although not significant, on small businesses that own or operate affected stationary diesel engines. During the initial years of implementation, the increased cost of equipment may lead to lower profits for some small businesses, primarily those operating prime engines.

In accordance with Government Code sections 11346.3(c) and 11346.5(a)(11), the ARB's Executive Officer has found that the reporting requirements of the regulation that apply to businesses are necessary for the health, safety, and welfare of the people of the State of California.

In accordance with H&SC 43013(c), the Executive Officer has determined that the standards and other requirements in the proposed ATCM are necessary, cost-effective, and technologically feasible for stationary diesel engines used in agricultural operations (i.e., farm equipment).

Before taking final action on the proposed regulatory action, the Board must determine that no reasonable alternative considered by the agency or that has otherwise been identified and brought to the attention of the agency would be more effective in carrying

out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the proposed action.

A detailed assessment of the economic impacts of the proposed regulatory action can be found in the Staff Report.

### **SUBMITTAL OF COMMENTS**

The public may present comments relating to this matter orally or in writing at the hearing, and in writing or by e-mail before the hearing. To be considered by the Board, written submissions must be received **no later than 12:00 noon, November 12, 2003**, and addressed to the following:

Postal mail is to be sent to:

Clerk of the Board  
Air Resources Board  
1001 I Street, 23<sup>rd</sup> Floor  
Sacramento, California 95814

Electronic mail is to be sent to: [statde@listserv.arb.ca.gov](mailto:statde@listserv.arb.ca.gov), and received at the ARB **no later than 12:00 noon, November 12, 2003**.

Facsimile submissions are to be transmitted to the Clerk of the Board at (916) 322-3928 and received at the ARB **no later than 12:00 noon, November 12, 2003**.

The Board requests but does not require 30 copies of any written submission. Also the ARB requests that written, facsimile, and e-mail statements be filed at least 10 days prior to the hearing so that ARB staff and Board Members have time to fully consider each comment. The ARB encourages members of the public to bring to the attention of staff in advance of the hearing any suggestions for modification of the proposed regulatory action.

### **STATUTORY AUTHORITY AND REFERENCES**

This regulatory action is proposed under the authority granted to the ARB in Health and Safety Code sections 39600, 39601, 39650, 39658, 39659, 39665, 39666, 41511, and 43013. This action is proposed to implement, interpret, or make specific Health and Safety Code sections 39002, 39650, 39658, 39659, 39665, 39666, 40000, 41511, and 43013.

## **HEARING PROCEDURES**

The public hearing will be conducted in accordance with the California Administrative Procedure Act, Title 2, Division 3, Part 1, Chapter 3.5 (commencing with section 11340) of the Government Code.

Following the public hearing, the ARB may adopt the regulatory language as originally proposed or with non-substantial or grammatical modifications. The Board may also adopt the proposed regulatory language with other modifications if the text as modified is sufficiently related to the originally proposed text that the public was adequately placed on notice that the regulatory language as modified could result from the proposed regulatory action. In the event that such modifications are made, the full regulatory text, with the modifications clearly indicated, will be made available to the public for written comment at least 15 days before it is adopted.

The public may request a copy of the modified regulatory text from the ARB's Public Information Office, Air Resources Board, 1001 I Street, Visitors and Environmental Services Center, 1<sup>st</sup> Floor, Sacramento, California 95814, (916) 322-2990.

CALIFORNIA AIR RESOURCES BOARD

/s/

Catherine Witherspoon  
Executive Officer

Date: September 16, 2003

*"The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our Web-site at [www.arb.ca.gov](http://www.arb.ca.gov)."*

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